RB-06-2007 INIT EXAM (TAC#: X02348)

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only		
1	H	2				X								U	Answers C and D not credible Answer D is plausible because initially feedflow is greater than steam flow but is not the reason for increasing level. C is plausible because the feedwater FCVs close down, however level increases due to voiding. Question is ok as is.
2	H	3				X								E	SDG or EDG? Is answer C credible? Changed "Standby" to Emergency (EDG). C is credible because the breaker does trip open but not on the LOOP.
3	H	3										X		U	This is not a KA mismatch because the candidate has to interpret the voltage given in the stem to understand there has been a partial loss of DC power. The question is ok as is.
4	H	2												E	See markups – What is scram setpoint on turb trip? Corrected one of the two editing comments.
5	H	2												E	See markups Corrected editing markups.
6	F	2												S	
7	F	3												E	See markups Question ok as is.
8	H	3												E	Remove IAS vlvs – KA only refers to SA vlvs The SA valves are included because the logic is intertwined with IA and secondly, it enabled writing better distractors. Question is ok as is.
9	H	2												S	

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only		

Instructions
[Refer to Section D of ES-401 and Appendix B for additional information regarding each of the following concepts.]

1. Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level.

2. Enter the level of difficulty (LOD) of each question using a 1 - 5 (easy - difficult) rating scale (questions in the 2 - 4 range are acceptable).

3. Check the appropriate box if a psychometric flaw is identified:
   - The stem lacks sufficient focus to elicit the correct answer (e.g., unclear intent, more information is needed, or too much needless information).
   - The stem or distractors contain cues (i.e., clues, specific determiners, phrasing, length, etc).
   - The answer choices are a collection of unrelated true/false statements.
   - One or more distractors is (are) not credible.
   - One or more distractors is (are) partially correct (e.g., if the applicant can make unstated assumptions that are not contradicted by stem).

4. Check the appropriate box if a job content error is identified:
   - The question is not linked to the job requirements (i.e., the question has a valid K/A but, as written, is not operational in content).
   - The question requires the recall of knowledge that is too specific for the closed reference test mode (i.e., it is not required to be known from memory).
   - The question contains data with an unrealistic level of accuracy or inconsistent units (e.g., panel meter in percent with question in gallons).
   - The question requires reverse logic or application compared to the job requirements.

5. Check questions that are sampled for conformance with the approved K/A and those that are designated SRO-only (K/A and license level mismatches are unacceptable).

6. Based on the reviewer's judgment, is the question as written (U)nacceptable (requiring repair or replacement), in need of (E)ditorial enhancement, or (S)atisfactory?

7. At a minimum, explain any "U" ratings (e.g., how the Appendix B psychometric attributes are not being met).

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only		
10	H	3												E	See markups Made recommended editing changes. (5/16/07) Made changes at request of licensee. Editorial to stem. Distracter C changed to remove holder.
11	H	3												E	Reference material?
12	F	2												E	Reference material?

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only		
13	H	3				X								U	See markups. “C” wording is confusing - anticipating ED is required? The wording in distractor C is standard BWR EOP terminology and is correct as is.
14	H	2												E	See markups Text editing changes made as recommended.
15	H	3												S	
16	H	4											X	U	SRO level knowledge? Question was rewritten.
17	F	2												E	Reference material? Simplify stem wording The stem was revised.
18	F	3	X									X		U	Question should be how to override control rod insert blocks, not manually insert rods. Before the rods can be inserted, the rod blocks have to be over-ridden. Therefore the question is ok as is.
19	F	2				X								U	Reword distractors to form reasons, not statements. It is not clear what the difference is between reasons and statements. Each distractor contains a different reason to complete the statement in the stem. Left as is.
20	F	2												E	Ref material not adequate. Panel is H13-P861, not H13 P-861F Panel number was corrected.
21	F	3				X								U	“A” and “B” not credible – answer should be damage turb blading. Can’t “overfill” steam piping since it shouldn’t be filled at all. Rewrote distractors A and B.
22	F	3		X										U	Stem format bad. Answers have 1 open, 3 throttle – might cue. Also, two answers have F048 Revised the question to incorporate comments.
23	H	2										X		U	Reword question – KA is operate/monitor Rewrote stem.
24	H	2	X											U	Reword stem – see markups Editing markups corrected.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only		
25	H	3											X	U	Operability determination is SRO only Rewrote stem to eliminate the word inoperable.
26	F	2										X		U	No relation to Sec. Cont. – just ARM system knowledge (setpoint defn) The KA relates high secondary containment radiation levels to the ARM system. The question gives a high ARM indication and asks what this means in terms of radiation level in the secondary containment. This matches the KA so the question is ok as written.
27	H	3				X								U	Question doesn't require interpretation of CR indications or test understanding of operator actions Revised stem and distractors.
28	H	3		X										U	See markups This question is satisfactory as written.
29	F	3												S	
30	F	2				X			X		X			U	Attach 2 to Appendix B of 1021 – this is low level of knowledge and backwards logic This question is not backwards logic and matches the level of knowledge required by the KA. It is satisfactory as is.
31	F	2												?	Reference material not adequate to verify Verified the question is technically correct.
32	H	2												S	Flow diagram? This comment not understood – the question is testing the candidate's knowledge of LPCS flowpaths that can affect RPV level.
33	F	2				X								U	"D" – manual action is not a design feature Distractor D is not a design feature which is why it is incorrect. The question is OK as is.
34	H	3			X									U	See markups Question was revised as some of the distractors are T/F statements.
35	F	2				X								U	"A" not credible Distractor A is credible since the backup scram solenoids do energize to trip. In order to eliminate this distractor the candidate must also know the power supply to the backup scram solenoids is RPS. Question OK as is.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only		
36	F	3				X								U	"A" and "D" not credible Rewrote distractors A and D.
37	H	2				X								U	"C" not credible Rewrote distractor C.
38	H	2												E	See markups Addressed editing comments.
39	H	2												?	Ref material not adequate to verify. See markups Addressed the text editing comments. Verified the question is technically correct.
40	H	2										X		U	Doesn't test operational implications Rewrote question.
41	H	3												E	See markups Addressed the text editing comments.
42	F	2												?	No ref material Verified the question is technically correct. Revised the stem to eliminate the potential of more than one correct answer.
43	F	3												E	See markups Addressed the editing comments. (5/16/07) Changed stem at request of licensee to reflect procedural changes that removed immediate actions.
44	H	3												S	
45	F	3												S	

Q#	1.	2.	3. Psychometric Flaws	4. Job Content Flaws	5. Other	6.	7.

			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only		
46	H	3				X								U	"D" not credible. Ref matl not adequate Rewrote disctractor D.
47	H	3				X								E	See markups This question is ok as written.
48	H	3												E	See markups This question is ok as written.
49	F	2							X					U	Low level of knowledge This question matches the KA and is ok as written.
50	H	2				X								U	"B" – ref matl shows electrical fault DG trip is not active on LOCA It is correct that the generator ground fault will not trip the EDG. However, it will cause all the feeder breakers to the bus to open resulting in a loss of SWG01A. The question is correct as written.
51	H	3	X											?	Is containment purge in progress? Ref matl not clear Rewrote distractor B so the question of a containment purge being in progress is not relevant.
52	F	2												E	See markups Addressed the text editing comments.
53	H	3				X								U	"D" – why would operator press start pushbutton if pump auto-starts? Under certain conditions, this has an effect on pump logic. This question is ok as is.
54	H	2												S	
55	H	3				X								U	"B" not credible Rewrote distractor B.
56	F	2												E	See markups This question is ok as written.
57	H	3												S	
58	H	4												S	
59	F	3												U	See markups It is not apparent from the markups why this question is U. The pools addressed by this question are typically referred to as the upper and lower pools and therefore this question is ok as is.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only		
60	H	3												E	See markups Addressed the text editing comments.
61	F	2							X					U	Low level of knowledge This question matches the KA and is ok as written.
62	H	3				X								U	“D” – stem states Rx pwr at 80% for 3 days. “B” – not credible Distractor B is credible since there is a CRUD redistribution under certain conditions (such as changing hydrogen injection rates). Revised stem so that distractor D is plausible.
63	F	2												E	Ref matl doesn’t state where Halon discharges Verified this question is technically accurate.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only		
64	H	2		X										U	Identifying Bank 5A2 in stem cues that something is wrong w/ 2100 psig It is given in the stem that one of the air bottles is lower than the other. To correctly answer this question the candidate must know the lower pressure limit and required number of bottles for operability and whether the bottle needs to be replaced or repressurized. Therefore this question is ok as written.
65	F	3				X								U	“D” – change to match first part of “A” Revised distractor as indicated.
66	F	2				X								U	“B” not credible (electricians operating Safety Related equip?) The electrician is not operating the equipment but providing a peer check. This is procedurally allowed if there is no integrated plant response making this a credible distractor. The question is ok as is.
67	F	2												E	See markups Distractor A is correct as stated and the question is ok as is.
68	F	3										X		U	Doesn’t’ test function of component The function of the component is required knowledge to understand the purpose that the component serves. Question is ok as is.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only		
69	H	3				X								U	"A" implies operator should "immediately monitor…" – not credible. "D" also not credible at 95% power. Distractor A is credible since a loss of feedwater heating will result in a rise in reactor thermal power and should be monitored. D is credible since under certain high power conditions rods are used to reduce power (but not for a loss of FW heating). The question is ok as is.
70	F	3												?	No reference material The question is technically correct however the stem was revised to specify a safety limit violation versus an LCO entry condition. (5/16/07) Changed answers C and D at the request of licensee to reflect safety limit violations.
71B	F	2												E	What is basis for "A" and "B"? One should be the RBS annual dose limit minus 1.25 rem. A and B are the admin limits minus 1.25. Question is ok.
72	H	3												S	
73	H	3												E	"B" – trip the Rx and enter EOP-1? Credible? It is not necessary to trip the reactor since containment pressure is 2.5 psig (implies drywell pressure is greater than the scram setpoint) a scram would have occurred. In some cases it is required to enter EOP-1 as stated, however the rest of the B deals with emergency depressurization which is not required. The action of entering EOP-1 is stated in EOP-2 for high drywell temperature requiring emergency depress, which does not exist. The question is ok as written.
74	H	3												E	See markups Made the indicated text edit change.
75	F	3												E	See markups Made the indicated text edit change and also replaced distractor B.
76	H	3												S	(5/16/07) Changed distractor A at request of licensee.
77	H	3				X								U	"A" not credible (nothing in stem would indicate a scram) Since many of the conditions could be cause by a level 1 isolation signal entry into EOP-1 is potentially correct. However with all the conditions it can be determined a level 1 isolation was not the cause. The question is ok as is.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only		
78	H	3				X								U	"C" not credible. "B" and "D" too similar Distractor C is credible since many refueling event AOPs require immediate evacuation of the containment including loss of SDC. B and D are not similar in that D imposes further restrictions. Corrected text editing comments. (5/16/07) Reference material will be supplied for this question.
79	H	2												S	
80	H	3												E	See markups Distractor A text editing comment addressed. (5/16/07) Made changes to stem at request of licensee.
81	H	3												S	(5/16/07) Reference material will be handed out for this question
82	F	2				X								U	"C" is only correct if SM has not been relieved as Emer Director – should have by now Revised stem to make it clear the SM is the Emergency Director.
83	H	3												E	See markups Text editing comments addressed. (5/16/07) Changed distractor A at request of licensee.
84	H	3												S	Ref matl not adequate
85	H	3				X								U	"D" not credible given RPV 250 psig. Both "A" and "C" are EOP-2 at H2 control RPV pressure of 250 psig does necessarily eliminate the need for emergency depressurizing making D credible with the given conditions. Distractors A and C have different action requirements. The question is OK as is. (5/16/07) Changed distractor B and reference material will be available at request of licensee.
86	H	3												E	See markups Comments addressed.
87	H	3												E	See markups Comment in stem addressed.
88	H	3										X		U	Inhibiting ADS is not the same as ADS failing to initiate However in either case ADS will not initiate as designed making this question ok as written.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only		
89	H	3	X											U	Stem doesn't state Shift Mgr is Emergency Director Stem revised to make it clear the SM is acting as the Emergency Director
90	H	3												E	See markups The question is ok as is.
91	F	2												E	See markups The question is ok as is.
92	H	2		X										U	"B" and "C" are AOP-27 – could cue the answer The question is ok as is.
93	H	2												E	See markups Text editing comment addressed.
94	H	2												E	See markups Editorial comments were addressed.
95	H	5										X		U	Doesn't require determining Mode. Handout on Q87 gives the answer. Good catch – rewrote the question. (5/16/07 Rewritten question) Same question format ended up on the Audit exam; this exam independently developed.
96	F	2		X										U	"B" and "C" are same procedure While the two distractors contain the same procedure, they require different actions be taken making the distractors different and discriminatory. The question is ok as written.
97	F	3												E	See markups Most the editorial comments were addressed.
98	F	3				X								U	"D" – If RMS-RE107 weren't running, how did it alarm? Precautionary note in the procedure SOP-113 states that RMS-RE107 must be operable in order to take the actions of an alarming condition which makes this a plausible distractor. A chemistry sample is required which also makes this a plausible distractor. What makes this incorrect is that RMS-RE107 is not required for chemistry to draw a sample. The two are mutually exclusive. Question is ok as is.
99	H	2												E	See markups Comment resolved.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only		
100	F	2		X		X								U	Handout makes answer a direct lookup Changed question
RO B-1 M-0 N-74	H-43 F-32	2.57	3	3	1	20	0	0	3	0	1	6	2	U – 34 E – 25 S – 11 ? – 5	**RO TOTALS**
SRO B-0 M-0 N-25	H-19 F-6	2.72	1	3	0	6	0	0	0	0	0	2	0	U – 11 E – 10 S – 4	**SRO TOTALS**

GENERAL COMMENTS:

1. New questions are not specifically identified; it is assumed that if a question is not noted as Mod or Bank, then it is a New question.
2. RO answer breakdown: a – 18 b – 24 c – 19 d – 14 (Q34-36 all c's / Q50-53 all b's)
3. SRO answer breakdown: a – 6 b – 6 c – 8 d – 5

NOTES:

1. Bank questions are indicated by B
2. Modified are indicated by M
3. comment resolution is indicated in *blue*;

QUESTION NO. 4

The main turbine has just tripped while operating at 40% reactor power.

The operator would expect to see _____.

A. All 8 Scram Pilot Solenoid Valve indicating lights out on H13 P691

B. Turbine bypass valves indicate they are open on H13 P680

C. ENS-SWG01A aligned to NNS-SWG1B on H13 P808

D. The main generator output breakers tripped and the exciter field breaker closed on H13 P680

Answer: B
A – Wrong panel
C – Wrong alignment
D – Wrong alignment

K/A Statement: Ability to locate control room switches, controls and indications; and to determine they are reflecting the correct lineup. (Main Turbine Trip)

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
295005 2.1.31 (generic)	**4.2**	**3.9**	**41.7**	**AOP-2**	**RLP-STM-0310 G.**

Tier/Group: 1/1 LOK: H LOD: 3
Origin: NRC
History: New NRC BANK QID: N/A

QUESTION NO. 5

The plant had been at 100 percent power for the last 300 days when all MSIVs close and a scram occurs.

One minute following the SCRAM, decay heat is being removed by automatic operation of the Safety Relief Valves in the _____.

A. Safety Mode

B. Low-Low Set Mode

C. Relief Mode

D. ADS Mode

Answer: B
The SRVs initially operate in relief mode; however, pressure is maintained and decay is removed by the operation in low-low set.

K/A Statement: Knowledge of the operational implications of decay heat generation and removal as it applies to SCRAM.

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
295006 AK1.01	**3.7**	**3.9**	**41.8-10**	**SOP-0035 STM-109**	**RLP-STM-109 E**

Tier/Group: 1/1 LOK: H LOD: 2
Origin: NRC
History: New NRC BANK QID:

QUESTION NO. 7

The plant was operating at 100 percent power when a Complete Loss of Reactor Plant Component Cooling Water occurs.

Procedure AOP-11, Loss of RPCCW, directs the reactor be scrammed because:

A. Recirculation pumps must be tripped and isolated

B. CCP cooled Div 1 and 2 components will be isolated from the CCP system

C. Both CRD pumps will automatically trip

D. CRD charging water pressure will fall below 1540 psig with Reactor Steam Dome pressure greater than 600 psig

Answer: A
B, C and D are all conditions which could lead to reactor shutdown (scram). A is the correct choice for this situation because the next step after scram is tripping of recirculation pumps.

K/A Statement: Knowledge of the reasons for power reduction as it applies to Partial or Complete Loss of Component Cooling Water.

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
295018 AK3.02	**3.3**	**3.4**	**41.5**	**TS 3.1.5 AOP-0011**	**RLP-STM-0115 Att4.F**

Tier/Group: 1/1 LOK: F LOD: 3
Origin: NRC
History: New NRC BANK QID: N/A

QUESTION NO. 10

The plant is in a refueling outage and fuel is being removed from the core. The following conditions exist:

- HVF-FN3A (EXH FLT TRN) is tagged out for repairs, and the maintenance has just been completed. No sign-offs have been performed.
- HVF-FN3B (EXH FLT TRN) is running in emergency mode

A refueling accident occurs, releasing airborne contamination into the fuel building.

Concurrently, HVF-FN03B trips off due to a ground fault.

As part of emergency releasing the tagout on FN03A, which ONE of the following is performed?

A. Perform a safety evaluation after the tagout has been released

B. The maintenance supervisor(s) will sign off the Tagout Holders and Work Order Holders

C. Document the reason for the emergency release on the Work Order Holder

D. Notify all Tagout Holders and Work Order Holders of the tagout removal

Answer: D
A. Safety evaluation before release
B. CRS will sign off
C. Tagout will receive documentation

K/A Statement: Knowledge of tagging and clearance procedures. (refueling accidents)

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
295023 2.2.13 (generic)	**3.6**	**3.8**	**41.10 43.5**	**EN-OP-102 (5.21)**	**RLP-STM-055 Att3.G**

Tier/Group: 1/1 LOK: H LOD: 4
Origin: NRC
History: New NRC BANK QID: N/A

QUESTION NO. 13

The crew has entered EOP-2 (Containment Control) due to high suppression pool temperature.

EOP-2 directs the crew to enter EOP-1 (RPV Control) and scram the reactor before suppression pool temperature reaches 110°F because _____.

A. The Heat Capacity Temperature Limit is in the unsafe zone at 110°F

B. Scramming assures that, if possible, the reactor will be shut down before the boron injection temperature is reached

C. Anticipating Emergency Depressurization is required when the Boron Injection Temperature is reached

D. An Emergency Depressurization is required when suppression pool temperature is 110°F

Answer: B
Basis for entering EOP-1 and scramming the plant. Since the plant uses 110F instead of a graph. This will ensure the plant will be shut down enough prior to reaching BIT.

A. HCTL is safe at 110F
C. True, but not the reason for EOP-2 transition to EOP-1
D. ED is not required at this temperature

K/A Statement: Knowledge of the reasons for reactor SCRAM as it relates to Suppression Pool High Water Temperature.

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
295026 EK3.05	**3.9**	**4.1**	**41.5**	**EOP 2 Bases**	**RLP-STM-514 Att3.D.c**

Tier/Group: 1/1 LOK: H LOD: 3
Origin: NRC
History: New NRC BANK QID: N/A

QUESTION NO. 14

While in Mode 1, containment temperature rises to 91°F and the operators enter EOP-2 "Containment Temperature Control". An operator notes HVR-UC1A, CONTMT UNIT CLR A is the only running unit cooler.

Operators should _____ to lower containment temperature.

A. Enter containment and adjust HVR-TIC26A, CONTMT UNIT CLR 1A INTAKE TEMPERATURE INDICATING CONTROLLER

B. Ensure HVR-FN1A, B, C and D CONTMT DOME RECIRC FANS are running

C. Start HVR-UC1B, CONTMT UNIT CLR B

D. Perform a containment high volume purge

Answer: C

A, B, D – Although they may lower temperature, temperature has risen since the required number of coolers (2) was not running. Containment purging is not allowed in mode 1.

K/A Statement: Ability to operate and/or monitor containment ventilation/cooling as it applies to High Containment Temperature.

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
295027 EA1.02	**3.5**	**3.5**	**41.7**	**SOP-0059 EOP-2**	**RLP-STM-57 CC.b**

Tier/Group: 1/1 LOK: F LOD: 2

Origin: NRC

History: New NRC BANK QID: N/A

QUESTION NO. 24

What are the operational implications of starting to cool down during an ATWS when no boron has been injected, RPV level has been lowered, and reactor power is 5 x 10^4 cps?

A. The normal cooldown prescribed in EOP-1A may cause a return to criticality.

B. Reactor behavior is unpredictable when no born has been injected and a cooldown is commenced.

C. A return to criticality can not be stopped by stopping the cooldown.

D. The normal cooldown prescribed in EOP-1A will exceed the RPV metal ductility limits.

Answer: A
B. Less than shutdown born weight injected and cooldown commenced with return to criticality
C. It can be stopped
D. Normal cooldown rate will not exceed ductility limits

K/A Statement: Knowledge of the operational implications of cool down effects on reactor power as it applies to Incomplete Scram.

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
295015 AK1.02	**3.9**	**4.1**	**41.8**	**EOP 1A Bases**	**None**

Tier/Group: 1/2 LOK: H LOD: 4
Origin: NRC
History: New NRC BANK QID: N/A

QUESTION NO. 28

The plant was operating at 100 percent power when a large break loss of coolant accident occurs. RPV pressure transmitters PT-098A and PT-098E which input into the RHR isolation logic fail, as is, at 950 psig.

What effect will this failure have on 'A' RHR?

A. E12-MOV042A (Div I LPCI Injection Valve) will not open

B. E12-MOV048A (Div I Heat Exchanger Bypass) will not open

C. 'A' RHR pump will not auto-start

D. E12-MOV064A (Min Flow Bypass Valve) will remain shut

Answer: A
MOV 42A is interlocked with pressure transmitters.
B. Bypass valves are open
C. Pump start is not interlocked with pressure
D. If the pump is running, min flow will remain open until the discharge opens and min flow is established

K/A Statement: Knowledge of the effect that a loss or malfunction of nuclear boiler instrumentation will have on RHR/LPCI: Injection Mode

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
203000 K6.09	**3.4**	**3.4**	**41.7**	**STM-204**	**SLP-STM-204 G. Q.h**

Tier/Group: 2/1 LOK: F LOD: 3
Origin: NRC
History: New NRC BANK QID: N/A

QUESTION NO. 34

Following an ATWS, Standby Liquid Control has been injecting for 5 minutes.

An operator notes that the SLC tank level indication has just failed low.

When Enclosure 15 (Alternate SLC Injection and SLC TK GAL TO LB Conversion) is installed as directed by EOP-1A (RPV Control ATWS), _____.

A. Hot Shutdown Boron Weight can be estimated by obtaining a tank level sounding

B. RPV water level can be restored after the tank is empty

C. Cold Shutdown Boron Weight can be estimated using injection time

D. Boron Concentration can be measured by sampling reactor coolant

Answer: C
A. Can be used, but not stated in enclosure 15
B. Not true
D. True statement, but does not answer the question

K/A Statement: Knowledge of the [operation implications] of the effects of tank level measurement as it relates to Standby Liquid Control

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
211000 K5.06	**3.0**	**3.2**	**41.5**	**EOP Enclosure 15 EOP-1A Basis**	**None**

Tier/Group: 2/1 LOK: H LOD: 3
Origin: NRC
History: New NRC BANK QID: N/A

QUESTION NO. 38

During a normal reactor startup, power is increasing, and operators begin retracting SRM detectors to maintain SRM indications within the limits specified in GOP-1. However, the 'A' SRM detector is stuck. Stuck where?

In accordance with SOP-74 (Neutron Monitoring System), operators should _____ to prevent a _____.

A. Bypass 'A' SRM; reactor scram Signal

B. Bypass 'A' SRM; rod withdraw block Signal

C. Pull the 'A' SRM drive motor fuses; damaged drive motor

D. Abort the startup; damaged SRM detector

Commence a Shutdown

Answer: B
To prevent a withdraw block, the SRM is bypassed.
There is no scram without shorting links
C and D: incorrect but plausible

K/A Statement: Ability to (a) predict the impacts of a stuck detector on the SRM system; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of these abnormal conditions.

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
215004 A2.03	**3.0**	**3.3**	**41.5**	**SOP-0074**	**RLP-STM-0503 Att3 A-J**

Tier/Group: 2/1 LOK: H LOD: 3
Origin: NRC
History: New NRC BANK QID: N/A

QUESTION NO. 41

A LOCA has occurred inside the drywell; however, the 'A' high drywell pressure input into ADS logic channel 'A' failed low. Conditions are as follows:

- Drywell pressure is 5 psid
- RHR 'A', 'B' and 'C' are in LPCI mode and operating
- RPV level is at Level 2 and decreasing

Assume operators take no actions.

Upon reaching Level 1, _____.

A. The Division II ADS valves will immediately open

B. All ADS valves will open 105 seconds later

C. Only the Division II ADS valves will open after a 105 second time delay

D. All ADS valves will open after a 5 minute + 105 second time delay

Answer: B

Either divisional actuation system will cause all ADS valves to open. The 105 second time delay for Div I will be affected, but not Div II. Therefore, the Div II actuation system will actuate all valves after 105 seconds. The 5 minute low-level override for high drywell pressure affects Div I actuation system only.

K/A Statement: Knowledge of the effect that a loss or malfunction of primary containment instrumentation will have of ADS.

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
218000 K6.07	**3.4**	**3.5**	**41.7**	**STM 202**	**RLP-STM-202 Att3.H.6**

Tier/Group: 2/1 LOK: H LOD: 3
Origin: NRC
History: New NRC BANK QID: N/A

QUESTION NO. 43

The plant is operating at 100 percent power and is in a normal line-up.

Safety Relief Valve F051D opens.

In accordance with AOP-35 (Stuck Open SRV), operators should immediately _____ to prevent _____.

A. Place the Mode Switch in SHUTDOWN when suppression pool temperature reaches 100°F; suppression pool temperature from going above 105 °F

B. Place the SRV control switch at P-601 in OPEN; a reactor Scram ~~before power can be reduced~~.

C. Cycle the SRV control switch at P-601 to OPEN then CLOSED; prevent suppression pool temperature from rising

D. Cycle the SRV control switch at P-601 to ~~OPEN~~ then CLOSED; prevent ~~feedwater temperature from dropping and~~ power from going above 100 percent.

Answer: B

When the SRV sticks open, the valve switch is placed in open to prevent the valve closure from inducing a pressure/power transient prior to power reduction.

A. Wrong temperature

C. The switch is cycled from open to closed to prevent energy deposition into the suppression pool, but this does not address the immediate operator response.

D. FW temp may drop and power may go above 100 percent, but the actions are wrong

K/A Statement:	Ability to (a) predict the impacts of a stuck open SRV; and (b) based on those predictions, use procedures to correct, control or mitigate the consequences of these abnormal conditions or operations

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
239002 A2.03	**4.1**	**4.2**	**41.5**	**AOP-0035**	**RLP-STM-0109 K**

Tier/Group	2/1	LOK:	H	LOD:	3
Origin:	NRC				
History:	New NRC			BANK QID:	N/A

QUESTION NO. 47

** AOP-42 Attachment 5 Included as Reference **

While operating at 90 percent power, Uninterruptible Power Supply ENB-INV01A failed, and power is lost to instrument bus VBS-PNL01A.

A reactor coolant leak develops in the drywell before power is restored to VBS-PNL01A, and drywell pressure rises to 2 psid.

The failed UPS will _____.

A. Prevent DIV 1 Balance-of-Plant isolation valves/dampers from automatically repositioning on a LOCA signal

B. Cause DIV 1 Balance-of-Plant isolation valves/dampers to automatically isolate before the LOCA signal is present

C. Cause DIV 1 Control Building Ventilation system to automatically switch to Filtration Mode before the LOCA signal is present

D. Prevent DIV 1 Control Building Ventilation system from automatically switching to Filtration Mode

Answer: A

B- Loss of power to VBS-PNL01A will activate the isolation circuit (ISCA03,4,5 & 6) master relays for the BOP isolations; however, the slave relays are also powered from VBS-PNL01A, and will not reposition (normally de-energized)

C,D- CB HVK is activated by BOP isolation logic relays powered from 125VDC

K/A Statement: Knowledge of the physical connections and/or cause-effect relationship between UPS (AC/DC) and containment isolation system.

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
262002 K1.08	**2.9**	**3.1**	**41.2-9**	**AOP-0042 Att. 5 STM-058 (BOP logic) STM-300**	**RLP-STM-58 I.a RLP-STM-300 P**

Tier/Group: 2/1 LOK: H LOD: 3

Origin: NRC

History: New NRC BANK QID: N/A

QUESTION NO. 48

While operating at 100 percent power, the breaker providing normal power to BYS-INV01B opens due to a fault in the breaker.

As a result,
~~Based on this~~, _____, and operators should _____.

A. A reactor SCRAM will occur; enter EOP-1 and place the standby UPS (BYS-INV03) in service per SOP-48, 120VAC System

B. BYS-INV01B static switch will automatically shift to the bypass regulator; open supply breaker to BYS-INV01B in NHS-MCC20B per procedure

C. RPV level will rapidly rise; control feedwater flow in manual control per procedure

D. BYS-INV01B output is supplied from 125VDC through the inverter; manually bypass the BYS-INV01B inverter per SOP-48, 120VAC System

Answer: D
A, C – There will be no effect on recirc flow or RPV level since the output voltage will not change
B – The static switch will not reposition since the inverter output is being supplied from the battery bus

K/A Statement: Ability to (a) predict the impacts of under voltage on the UPS (AC/DC); and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of these abnormal conditions or operations.

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
262002 A2.01	**2.6**	**2.8**	**41.5**	**SOP-048**	**RLP-STM-300 I.d, L.a**

Tier/Group: 2/1 LOK: H LOD: 3
Origin: NRC
History: New NRC BANK QID: N/A

QUESTION NO. 52

Instrument Air System compressors are currently sequenced A-B-C. The 'A' compressor was running, and has experienced an auto-trip due to loss of lube oil pressure.

Based on this, _____.

A. Instrument Air pressure will be controlled at the same pressure

B. Instrument Air pressure will be controlled at a lower pressure

C. Instrument Air pressure will be controlled at a higher pressure

D. The Diesel Air Compressor will start to maintain pressure

Answer: B

Sequencer controls the running of the compressors such that they turn on in sequence as pressure is reduced. Therefore, the compressor which controls pressure in this mode of failure will control pressure at a lower value.
D – Manually started

K/A Statement: Knowledge of the instrument air system design features and/or interlocks which provide for manual/automatic transfer of control.

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
300000 K4.01	2.8	2.9	41.7	STM-121	RLP-STM-121 C.a

Tier/Group: 2/1 LOK: F LOD: 3
Origin: NRC
History: New NRC BANK QID: N/A

QUESTION NO. 56

While operating at 90 percent power, RPS bus 'A' de-energizes.

~~Based on this~~ As a result, which of the following is the expected immediate MSIV response?

A. ONLY the inboard MSIVs will ~~close~~ remain open

B. ONLY the outboard MSIVs will ~~close~~ " "

C. ALL MSIVs remain open

D. ~~BOTH inboard and outboard~~ All the MSIVs will close

Answer: C
This condition will affect half the solenoid valves, but will not immediately isolate the inboard MSIVs.

K/A Statement: Ability to monitor automatic operation of the main and reheat steam system including isolation of the main steam system.

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
239001 A3.01	**4.2**	**4.1**	**41.7**	**STM-109**	**RLP-STM-109 B.o**

Tier/Group: 2/2 LOK: F LOD: 2
Origin: NRC
History: New NRC BANK QID: N/A

QUESTION NO. 59

While Fuel Pool Cooling is being supplied to the upper and lower pools, inadvertently leaving CCP-V206 (RPCCW TO FUEL POOL AND CLEANUP ISOLATION to the B fuel pool cooling loop) open will _____.

A. Fill the ~~lower~~ spent fuel pools

B. Fill the upper ~~storage~~ pools

C. Drain the upper ~~storage~~ pools

D. ~~Fill both upper AND lower fuel pools~~ Drain the spent fuel pool

Answer: B

Lessons learned in CR 2001-1335 shows that storage pool level will go up due to filling from the RPCCW system if CCP-V206 for B or 208 for A are left open

K/A Statement: Knowledge of the physical connections and/or cause-effect relationship between fuel pool cooling and cleanup: and storage pools.

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
233000 K1.15	**2.9**	**2.9**	**41.2-9**	**STM-602 SOP-91 RBS-CR-2001-1355**	**RLP-STM-602 G**

Tier/Group: 2/2 LOK: F LOD: 3

Origin: NRC

History: New NRC BANK QID: N/A

QUESTION NO. 60

While operating at 100 percent power, the unselected pressure controller output within the EHC pressure control unit failed as-is, at the same output as the selected controller.

One minute later, the selected pressure regulator within the EHC pressure control unit fails high.

Reactor steam flow will _____.

A. Not change

B. Go down then return to the 100 percent value

C. Go down and remain lower than the 100% value

D. Go up to 115% and remain

Answer: A
The fault detection circuit will automatically switch regulators, but does not know about the previous failure (Highlighted in STM-509 regulator failures).
B – True if there was a biasing circuit and no fault detection
C – true if failed low and unselected in test
D – true if there were no fault detection or biasing circuit: or unselected in test

K/A Statement: Knowledge of the effect that a loss or malfunction of the reactor/turbine pressure regulating system will have on reactor steam flow.

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
241000 K3.04	**3.8**	**3.9**	**41.7**	**STM-509**	**RLP-STM-509 W.d**

Tier/Group: 2/2 LOK: F LOD: 3
Origin: NRC
History: New NRC BANK QID: N/A

QUESTION NO. 67

While performing a HPCS flow test using the CST to CST flow path, opening the HPCS test return valves _____.

A. Is ~~an acceptable~~ a two-handed operation required by procedure

B. Must be completed without stopping until the desired flow rate is achieved

C. Must be performed one valve at a time to prevent valve seat erosion

D. Will cause Suppression Pool level to rise during the entire test

Answer: A
Straight out of EN-OP-115 and SOP-30 Caution statement
B – Stopped when min flow valve shuts and >750gpm (Would expect operators to know the basic sequence of opening test return valves, not the expected flow rates)
C – Caution statement and addendum 10.7 to EN-OP-115 states that they should be opened simultaneously
D – Only while min flow is open

K/A Statement: Ability to execute procedure steps.

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
Generic 2.1.30	**4.3**	**4.2**	**41.10**	**EN-OP-115 Addendum 10.7 Sect 4 SOP-30**	**None**

Tier/Group: 3 LOK: H LOD: 2
Origin: NRC
History: New NRC BANK QID: N/A

QUESTION NO. 74

Under which ONE of the following conditions can operators exit EOP-1A (RPV-ATWS control) and enter EOP-1 (RPV control) during an ATWS?

A. It has been determined the reactor will remain shut down at the present temperature and xenon concentration

B. It has been determined the reactor will remain shutdown under all conditions without boron

C. Reactor power is less than 5 percent

D. No boron has been injected AND the reactor is subcritical

Answer: B
A – all conditions required
C – incorrect
D – this is a transition point to start cooling down

K/A Statement: Knowledge of low-power / shutdown implications in accident (LOCA, Loss RHR) mitigation strategies.

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
Generic 2.4.9	**3.3**	**3.9**	**41.10**	**EOP-1A basis** **EOP basis App-A**	**None**

Tier/Group: 3 LOK: H LOD: 3
Origin: NRC
History: New NRC BANK QID: N/A

QUESTION NO. 75

During a reactor shutdown, all Control Room annunciators are lost. One minute has passed since the loss, and reactor power is still going down.

In accordance with AOP-55, Loss of Control Room Annunciators, the crew will _____.

A. Scram the reactor to place the reactor in a safe condition

B. Declare an ALERT per EIP-2-001 EAL 11

C. Declare a SITE AREA EMERGENCY per EIP-2-001 EAL 10

D. Stop reducing power and place the plant in stable condition

Answer: D
A – this will destabilize plant conditions
B – No xient and 15 minutes
C – Xient and 15minutes

K/A Statement: Knowledge of operator response to loss of all annunciators.

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
Generic 2.4.32	**3.3**	**3.5**	**41.10**	**AOP-55**	**None**

Tier/Group 3 LOK: F LOD: 2
Origin: NRC
History: New NRC BANK QID: N/A

QUESTION NO. 80
SRO

The crew has just completed the immediate actions of AOP-1 (Reactor Scram) following a high drywell pressure entry condition into EOP-1, RPV Control. The following plant conditions exist:

- Containment temperature is 165°F and rising 2°F/minute
- All available containment cooling is in operation
- Suppression pool level is 19 feet 10 inches
- Suppression pool temperature is 102°F
- Suppression pool cooling is in operation
- RPV level is +5 inches
- RPV pressure is 800 psig and lowering (20°F/hr cooldown using turbine bypass valves)

Based on this, the SRO should _____.

A. Continue in EOP-1, RPV Control, and rapidly depressurize the reactor without regards to cooldown rate using the turbine bypass valves

B. Enter EOP-4, Emergency Depressurization, and rapidly depressurize the reactor w/o regard to ΔT rate

C. Enter EOP-4, Emergency Depressurization, and prevent injection from LPCS and LPCI

D. Continue in EOP-1, RPV Control, and ~~depressurize~~ rapidly depressurize the reactor using SRVs, maintaining the cooldown rate less than 100°F/hr

Answer: A
In accordance with EOP-2, with temperature rising toward 185F and all cooling available, emergency depressurization is required. EOP-1 RP override (ED anticipated) requires rapid reduction in RPV pressure using bypass valves to reject heat to the condenser.

B – Yes, but should anticipate in accordance with EOP-1 RP to preserve suppression pool heat sink
C – First step in ED. ED is anticipated under the current conditions.
D – May already be happening based on scenario, but Bypass valves are preferred method to preserve heat sink

K/A Statement: Ability to determine and/or interpret containment temperature as it applies to High Containment Temperature.

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
295027 EA2.01	**N/A**	**3.7**	**43.5**	**EOP-2 EOP-1 EOP-4**	**None**

Tier/Group: 1/1 LOK: H LOD: 4
Origin: NRC
History: New NRC BANK QID: N/A

QUESTION NO. 83
SRO

The reactor was operating at 100 percent power with all systems operating normally. A reactor scram occurs and the recirculation pumps trip. RCIC and HPCS started, and reactor pressure is being maintained by automatic SRV cycling. The following annunciators are noted by the CRS immediately after the scram:

- P680/06A/B04 RPS TRIP RHR ISOL LOW RX WATER LEVEL 3
- P680/06A/A05 RPS TRIP REACTOR VESSEL HIGH PRESSURE
- P680/05A/C01 and C02 CHANNEL A HALF ATWS and Channel B HALF ATWS
- P601/19/A01,A03, B01 and B03 NSSS CHAN A/B/C/D INIT MS TNL HI AMB TEMP

Based on this, the SRO should enter _____.

A. AOP-4 (Loss of Condenser Vacuum)

B. AOP-3 (Automatic Isolations)

C. SOP-11 (Main Steam System)

D. SOP-22 (Instrument Air System)

Answer: B
Inadvertent MSIV isolation signal
A – Loss of vacuum would give similar outcomes, but not the alarms received
C – SOP-11 is for operation
D – SOP-22 instrument air normal prior to event. A loss of instrument air would require entry into an AOP.

K/A Statement: Ability to determine/interpret reactor pressure as it applies to inadvertent containment isolation.

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
295020 AA2.04	**N/A**	**3.9**	**43.5**	**AOP-3 STM-58**	**None**

Tier/Group: 1/2 LOK: H LOD: 2
Origin: NRC
History: New NRC BANK QID: N/A

QUESTION NO. 86
SRO

While operating at 100 percent power, the following annunciator alarms: HPCS INJECTION LINE LOW PRESSURE. An operator notes that the HPCS water leg discharge pressure is 0 psig as indicated on H13-P625.

This condition will impact the HPCS system by _____ and the SRO should _____.

A. Preventing automatic initiation of HPCS; enter Technical Specification LCO 3.5.1 (ECCS) for HPCS

B. Causing possible damage to the discharge piping when HPCS initiates; reference the ARP and attempt to start the HPCS line fill pump

C. Preventing HPCS injection in less than 27 seconds; reference the ARP and place HPCS in operation, using min flow to maintain the discharge path full

D. Draining the HPCS injection line; enter TR TLCO 3.5.1, (Discharge Line pressure alarm action statement) and perform SR 3.5.1.1 every 24 hours to ensure the discharge piping is full.

Answer: B
Line fill pump has tripped off. Attempt to restart. Possible voiding if not corrected, and damage to piping due to water hammer.
A – Will not prevent automatic initiation
C – Using min flow will fill the suppression pool, and not allowed by procedure. The HPCS system will still perform its function in <27 seconds
D – TRM requirement is for failed alarm indication

K/A Statement:	Ability to a) predict the impacts of pump trips on HPCS; and b) based on those predictions, use procedures to correct, control or mitigate the consequences of this abnormal condition or operation.

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
209002 A2.02	**N/A**	**3.7**	**43.5 43.3**	**ARP 601-16 G03 STM-203 SOP-30 TS 3.5.1 and basis**	

Tier/Group	2/1	LOK:	H	LOD:	3
Origin:	NRC				
History:	New NRC			BANK QID:	N/A

QUESTION NO. 87
SRO

** TS 3.5.3 Included as Reference **

It is June 5, and the reactor ~~is~~ Unit is operating in Mode 1. RCIC flow rate surveillance testing began at 1045 with the system aligned CST to CST. At 1100, inadvertent operator action causes the RCIC turbine to trip on over speed during restoration. The RCIC pump discharge pressure peaked at >2000 psig. At 1115, HPCS is verified operable. At 1130, the RCIC over speed trip is reset.

Based on this and the attached technical specification, _____.

A. RCIC is OPERABLE at 1130 on June 5

B. RPV pressure must be reduced below 150 psig by ~~2245~~ 2330 on June 20 associate a time w/ RCIC

C. RCIC must be restored to OPERABLE status by 1100 on June 19

D. The plant must be in Mode 3 by ~~2245~~ 2330 on June 19 associate a time w/ RCIC

Answer: C

Based on precautions of RCIC SOP, the pump is immediately inoperable and special tests must be performed which makes A incorrect. Plant pressure must be reduced below 150 psig 14 days (D incorrect) – 36 hours after declaring RCIC inoperable which makes B incorrect

K/A Statement: Ability to apply system limits and precautions. (RCIC)

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
217000 generic 2.1.32	**N/A**	**3.8**	**43.2**	**TS 3.5.3 and basis SOP-35**	**None**

Tier/Group: 2/1 LOK: H LOD: 4
Origin: NRC
History: New NRC BANK QID: N/A

QUESTION NO. 90
SRO

While operating at 100 percent power, a high current ground fault occurs on bus NNS-SWG1A.

Based on this, ~~the impact on the plant will be _____ and the SRO should enter _____~~. which of the following describes an impact on the plant and the procedure the SRO should enter?

A. A loss of cooling to the main turbine lube oil system; AOP-2 (Main Turbine Trip)

B. A loss of recirculation pump seal cooling; AOP-1 (Reactor Scram)

C. An auto-start of the Div II diesel generator; SOP-53 (Standby Diesel Generator)

D. A rise in APRM power indication; AOP-7 (Loss of Feedwater Heating)

Answer: D
Ground fault causes overcurrent condition. Will lose 2 feedwater heater drain pumps (HDL-P1A & C)
A – standby pump starts
B – CRD provides seal water purge flow, not cooling water
C – ENS-SWG01A normally powered from preferred station xfmr

K/A Statement: Ability to a) predict the impacts of exceeding current limitations on AC electrical distribution; and b) based on those predictions, use procedures to correct, control and/or mitigate the consequences of the abnormal condition.

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
262001 A2.10	**N/A**	**3.4**	**43.5**	**STM-108** **SOP-46** **AOP-7**	

Tier/Group: 2/1 LOK: H LOD: 3
Origin: NRC
History: New NRC BANK QID: N/A

QUESTION NO. 91
SRO

In order to place a procedural change into effect that changes the method of startup of the recirculation flow control system to a more efficient method, _____.

A. A 10CFR50.59 evaluation is performed and documented

B. ~~Continued~~ An determination is performed and operability ~~is~~ documented in accordance with EN-OP-104, Operability Determination

C. A license amendment is submitted to the NRC in accordance with 10CFR50.59

D. A condition report is submitted in accordance with EN-LI-102, Condition Reports

Answer: A
50.59 evaluation is performed to effect a procedure change (for systems referenced in the FSAR) which affects the method of startup to verify there is no significant increased risk.

K/A Statement: Knowledge of the process of making changes in procedures described in the safety analysis report.

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
202002 generic 2.2.6	**N/A**	**3.3**	**43.3**	**EN-OP-104 10CFR50.59**	

Tier/Group: 2/2 LOK: H LOD: 2
Origin: NRC
History: New NRC BANK QID: N/A

QUESTION NO. 93
SRO

The plant is operating per GOP-1, Reactor Startup. Reactor power is currently 8 percent and the main turbine is paralleled to the grid. Offgas adsorber trains are currently bypassed, and the Offgas Adsorber Train Mode Switch is in AUTO.

Reactor power is increased, and operators inadvertently leave the adsorber trains bypassed.

Based on this, as power is increased, the impact to the Offgas system will be _____; and recovery actions are taken per _____.

A. Post-Treatment Hi-Hi Radiation Level trip; AOP-1 (Reactor Scram) place the reactor mode switch in SHUTDOWN due to impending turbine trip

B. Post-Treatment Hi Radiation Level trip; SOP-92 (Offgas) and verify adsorber train inlet and outlet valves open and bypass valve shuts

C. Excessive Offgas system flow; AOP-5 (Loss of Condenser Vacuum) due to loss of steam jet air ejector efficiency

D. Post-Treatment Hi-Hi-Hi Radiation Level trip; AOP-? (Main Turbine Trip) due to loss of Offgas system flow

Answer: B
With mode switch in AUTO, the absorber trains will automatically realign when the post-treatment hi-level trip seal in. A-C-D

K/A Statement: Ability to a) predict the impact that power level changes will have on the off-gas system; and b) based on those predictions, use procedures to correct, control and/or mitigate the consequences.

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
271000 A2.15	**N/A**	**3.1**	**43.5**	**STM-606** **SOP-92**	

Tier/Group 2/2 LOK: H LOD: 2
Origin: NRC
History: New NRC BANK QID: N/A

QUESTION NO. 94
SRO

** TS 3.6.1.7 Included as Reference **

The plant is in Mode 1 on June 4, at 0800, when the 'A' primary containment cooler is declared inoperable and disassembly is started for a motor replacement.

On June 5, at 1200, the 'B' primary containment cooler is declared inoperable due to a common cause failure.

On June 5, at 1600, the 'A' primary containment cooler is declared operable.

With regard to TS 3.6.1.7, the current status is: the reactor must be in Mode 3 no later than ____.

A. June 11 at 2000

B. June 12 at 2000

C. June 13 at 0000

D. June 13 at 0400

Answer: C

Apply completion time rules to Condition A: June 5, at 1200, plus 7 days is more restrictive than June 4, at 0800, plus 7 days plus 24 hours. Add 12 hours to get the Mode 3 completion time. Need to recognize that both pumps were out simultaneously, and the original was restored.

K/A Statement: Knowledge of conditions and limitations in the facility license.

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
Generic 2.1.10	**N/A**	**3.9**	**43.1**	**TS 3.6.1.7 TS 1.0**	

Tier/Group: 3 LOK: H LOD: 2

Origin: NRC

History: New NRC BANK QID: N/A

QUESTION NO. 97
SRO

Prior to moving recently irradiated fuel in the upper fuel pools, the SRO must verify _____.

A. All control rods are fully inserted

B. The all rods in interlock is active OPERABLE

C. 2 control room fresh air subsystems are OPERABLE

D. 2 channels of mode switch position in shutdown per trip system are OPERABLE

Answer: C
A, B, D – core alterations

K/A
Statement: Knowledge of SRO fuel handling responsibilities.

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
Generic 2.2.29	N/A	3.8	43.6	FHP-001 Att 2	

Tier/Group: 3 LOK: H LOD: 3
Origin: NRC
History: New NRC BANK QID: N/A

QUESTION NO. 99
SRO

While operating at 100 percent power, the following conditions develop in sequence:

- Reactor and main generator power rapidly drop to 90 percent of rated
- Recirculation flow control valve positions did not change
- Recirculation loop 'A' flow is 10 percent higher than loop 'B'
- RPV level rapidly rises to level 8, followed by a reactor scram and turbine trip

Based on this, the SRO should enter _____.

A. AOP-6, Condensate and Feedwater Failures

B. AOP-9, Loss of Normal Service Water

C. AOP-42, Loss of Instrument Bus

D. AOP-62, Jet Pump Failures

Answer: D
A – May cause water level rise, but not trend in power and recirc flow differential
B -- Loss of all service water can cause a scram
C – Loss of an instrument bus may cause some of the indications, but not all
K/A Statement: Knowledge of abnormal condition procedures.

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
Generic 2.4.11	**N/A**	**3.6**	**43.5**	**AOP-62**	

Tier/Group: 3 LOK: H LOD: 3
Origin: NRC
History: New NRC BANK QID: N/A

LICENSEE COMMENTS

QUESTION NO. 10

The plant is in a refueling outage and fuel is being removed from the core. The following conditions exist:

- HVF-FN03A (EXH FLT TRN) is tagged out for repairs, and the maintenance has just been completed. No sign-offs have been performed.
- HVF-FN03B (EXH FLT TRN) is running in emergency mode

A refueling accident occurs, releasing airborne contamination into the fuel building.

Concurrently, HVF-FN03B trips off due to a ground fault.

As part of emergency releasing the tagout on FN03A, which ONE of the following is performed?

A. Perform a safety evaluation after the tagout has been released

B. The maintenance supervisor(s) will sign off the Tagout Holders and Work Order Holders

C. Document the reason for the emergency release on the Work Order Holder

D. Notify all Tagout Holders and Work Order Holders of the tagout removal

Answer: D
A. Safety evaluation before release
B. Shift Manager will sign off
C. Tagout will receive documentation

K/A Statement: Knowledge of tagging and clearance procedures. (refueling accidents)

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
295023 2.2.13 (generic)	**3.6**	**3.8**	**41.10 43.5**	**EN-OP-102 (5.21)**	**RLP-STM-055 Att3.G**

Tier/Group 1/1 LOK: H LOD: 4
Origin: NRC
History: New NRC BANK QID: N/A

COMMENTS:

Stem:
NONE.

Distractors:

C. Delete 'Holder' from the end of the distractor, the reason would be documented on the 'Work Order' and not the 'Work Order Holder'.

Other:
Delete the '0' in all fan mark numbers; HVF-FN03A to HVF-FN3A.

LICENSEE COMMENTS

QUESTION NO. 43

The plant is operating at 100 percent power and is in a normal line-up.

Safety Relief Valve F051D opens.

In accordance with AOP-35 (Stuck Open SRV), operators should immediately _____ to prevent _____.

A. Place the Mode Switch in SHUTDOWN when suppression pool temperature reaches 100°F; suppression pool temperature from going above 105 °F

B. Place the SRV control switch at H13 P-601 in OPEN; a reactor Scram

C. Cycle the SRV control switch at H13 P-601 to OPEN then CLOSED; suppression pool temperature from rising

D. Cycle the SRV control switch at H13 P-601 to OPEN then CLOSED; feedwater temperature from dropping and power from going above 100 percent.

Answer: B
When the SRV sticks open, the valve switch is placed in open to prevent the valve closure from inducing a pressure/power transient prior to power reduction.
A. Wrong temperature
C. The switch is cycled from open to closed to prevent energy deposition into the suppression pool, but this does not address the immediate operator response.
D. FW temp may drop and power may go above 100 percent, but the actions are wrong

K/A Statement:	Ability to (a) predict the impacts of a stuck open SRV; and (b) based on those predictions, use procedures to correct, control or mitigate the consequences of these abnormal conditions or operations

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
239002 A2.03	**4.1**	**4.2**	**41.5**	**AOP-0035**	**RLP-STM-0109 K**

Tier/Group	2/1	LOK:	H	LOD:	3
Origin:	NRC				
History:	New NRC			BANK QID:	N/A

COMMENTS:

Stem:
AOP-035 Stuck open SRV has been revised since this was written and the candidates are being trained and will be tested on the new revision. The new revision does not have any immediate actions; all actions are in the subsequent actions section of the procedure. Therefore recommend re-wording the question per the next page

Distractors:
See below

Other:
NONE.

LICENSEE COMMENTS

QUESTION NO. 43

The plant is operating at 100 percent power and is in a normal line-up.

Safety Relief Valve F051D opens.

In accordance with AOP-35 (Stuck Open SRV), operators should _____ to prevent _____.

A. Place the Mode Switch in SHUTDOWN when suppression pool temperature reaches 100°F; suppression pool temperature from going above 105 °F.

B. Place the SRV control switch at H13-P601 in OPEN; a reactor Scram.

C. Take the SRV control switch at H13-P601 from AUTO to CLOSE; exceeding design steam flow in a main steam line

D. Cycle the SRV control switch at H13-P601 to OPEN then CLOSED; feedwater temperature from dropping more than 50°F and power from going above 100 percent.

Answer: B

When the SRV sticks open, the valve switch is placed in open to prevent the valve closure from inducing a pressure/power transient prior to power reduction.

A. Wrong temperature
C. The switch is cycled to open and then to close to attempt to close the valve; there is no concern for exceeding steam line flow.
D. FW temp may drop but not by 50°F

K/A Statement:	Ability to (a) predict the impacts of a stuck open SRV; and (b) based on those predictions, use procedures to correct, control or mitigate the consequences of these abnormal conditions or operations

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
239002 A2.03	**4.1**	**4.2**	**41.5**	**AOP-0035**	**RLP-STM-0109 K**

Tier/Group	2/1	LOK:	H	LOD:	3
Origin:	NRC				
History:	New NRC			BANK QID:	N/A

LICENSEE COMMENTS

QUESTION NO. 70

Which of the following would exceed a Technical Specification Safety Limit?

A. MCPR is 1.15 at 75 percent reactor power

B. Operating single loop and thermal power is 80 percent of rated

C. Reactor pressure is 870 psig at 20 percent reactor power

D. Reactor power is 20 percent and core flow is 8 percent of rated core flow

Answer: B
A, C and D are incorrect.

K/A Statement: Knowledge of the limiting conditions for operations and safety limits

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
Generic 2.2.22	**3.4**	**4.1**	**41.5 43.2**	**TS LCO**	**None**

Tier/Group 3 LOK: F LOD: 2
Origin: NRC
History: New NRC BANK QID: N/A

COMMENTS:

Stem:

NONE

Distractors:

The correct answer 'B' is not a safety limit at River Bend therefore recommend the following changes:

B. From 'Operating single loop and thermal power is 80 percent of rated' to Reactor pressure is 765 psig at 25 percent reactor power.

C. From 'Reactor pressure is 870 psig at 20 percent reactor power' to 'Reactor Steam dome pressure is 1315 psig'.

Other:
NONE

LICENSEE COMMENTS

QUESTION NO. 76
SRO

NPS-SWG1A and NPS-SWG1B are lost due to a fault on NJS-LDC1A while attempts were being made to electrically cross tie NJS-LDC1A.

This will impact the plant by causing _____.

A. a scram and an isolation of the MSIVs and EOP-1 'RPV CONTROL' should be entered.

B. a trip of the running CRD pump and the standby pump should be immediately started by implementing ARP-601-22-A01 'CRD PUMP A OR B AUTO TRIP'.

C. all emergency diesel generators to start and supply electrical power and AOP-0004 "LOSS OF OFFSITE POWER' should be implemented.

D. both RPS busses to be lost and EOP-1A 'RPV CONTROL ATWS' should be entered.

Answer: A
B. Running CRD pump will trip, no procedural guidance to immediately start the standby pump
C. Diesels will not start, AOP-0004 should not be entered
D. Both RPS busses will be lost, EOP-001A should not be entered because all rods should insert.

K/A Statement: Partial or Complete Loss of AC: Knowledge of EOP entry conditions or immediate action steps

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
295003 Generic 2.4.1	**N/A**	**4.6**	**43.5**	**EOP-1 STM-508**	**None**

Tier/Group 1/1 LOK: H LOD: 4
Origin: NRC
History: New NRC BANK QID: N/A

COMMENTS:

Stem:

Answer:

Recommend changing 'A' from "a scram due to an isolation…" to "a scram and an isolation…" The reactor scram signal will most likely be due to the de-energization of both RPS busses and not the MSIV isolation. The MSIVs will isolate and that is a scram signal but this will occur after the RPS bus is de-energized.

Other:
NONE

LICENSEE COMMENTS

QUESTION NO. 78
SRO

The plant is in a refueling outage. RPV level is 24 feet above the flange, and irradiated fuel is in the core.

According to procedure FHP-001 (Control of Fuel Handling and Refueling Operations), the actions of TS 3.9.8 (RHR – High Water Level) are required to be met while in this condition.

If shutdown cooling is lost, and an alternate method of decay heat removal is not verified available within 1 hour, then the actions contained in TS 3.9.8 would _____.

A. Require immediate suspension of all fuel movement within the containment pools

B. Allow continued removal of irradiated fuel from the RPV

C. Require immediate evacuation of primary containment

D. Allow continued removal of irradiated fuel from the RPV, ONLY after restoring primary containment

Answer: B
Loading of irradiated fuel is not allowed; and removing irradiated fuel is allowed which makes A&D incorrect. Immediate action is required to restore containment to operable which is a distracter for D. C is required in cases of gas bubbles or evidence of fuel damage which threatens worker safety.

K/A Statement: Knowledge of new and spent fuel movement procedures. (Loss of shutdown cooling)

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
295021 generic 2.2.28	**N/A**	**3.5**	**43.7**	**FHP-001 TS 3.9.8**	**None**

Tier/Group: 1/1 LOK: H LOD: 3
Origin: NRC
History: New NRC BANK QID: N/A

COMMENTS:

Stem:

Answer/Distractor:

NONE.

Other:
Recommend giving section 3.9 of T.S. as handout material. The action required if the 1 hour action(s) are not met is not required from memory.

LICENSEE COMMENTS

QUESTION NO. 80
SRO

The crew has just completed the immediate actions of AOP-1 (Reactor Scram) following a high drywell pressure entry condition into EOP-1, RPV Control. The following plant conditions exist:

- Containment temperature is 165°F and rising 2°F/minute
- All available containment cooling is in operation
- Suppression pool level is 19 feet 10 inches
- Suppression pool temperature is 102°F
- Suppression pool cooling is in operation
- RPV level is +5 inches
- RPV pressure is 800 psig and lowering (20°F/hr cooldown using turbine bypass valves)

Based on this, the SRO should _____.

A. Continue in EOP-1, RPV Control, and rapidly depressurize the reactor using the bypass valves without regard to cooldown rate

B. Enter EOP-4, Emergency Depressurization, and rapidly depressurize the reactor

C. Enter EOP-4, Emergency Depressurization, and prevent injection from LPCS and LPCI

D. Continue in EOP-1, RPV Control, and depressurize the reactor using SRVs, maintaining the cooldown rate less than 100°F/hr

Answer: A
In accordance with EOP-2, with temperature rising toward 185F and all cooling available, emergency depressurization is required. EOP-1 RP override (ED anticipated) requires rapid reduction in RPV pressure using bypass valves to reject heat to the condenser.

B – Yes, but should anticipate in accordance with EOP-1 RP to preserve suppression pool heat sink
C – First step in ED. ED is anticipated under the current conditions.
D – May already be happening based on scenario, but Bypass valves are preferred method to preserve heat sink

K/A Statement: Ability to determine and/or interpret containment temperature as it applies to High Containment Temperature.

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
295027 EA2.01	**N/A**	**3.7**	**43.5**	**EOP-2 EOP-1 EOP-4**	**None**

Tier/Group: 1/1 LOK: H LOD: 4
Origin: NRC
History: New NRC BANK QID: N/A

LICENSEE COMMENTS

COMMENTS for question #80:

Stem:

The issue is the SRO judgement call concerning the statement 'can not be maintained'. The EOP-02 basis states that when primary containment temperature 'can not be maintained' below 185°F that an emergency depressurization can be performed even if current temperature is below 185°F. And if in the SROs judgement 10 minutes before the actual requirement to emergency depressurization is correct then that would be hard to refute considering the time for briefing, updating etc. Using the previous logic B and C could also be correct. C could be correct due to the stem stating that a 1.68 psid signal exists or at least existed. EOP-1 RPV Control pressure leg states that if a 1.68 psid signal exists and ECCS is not needed they are to be overridden. With level at +5 inches they should not be needed.

Recommend changing stem from '…(Reactor Scram) following a high drywell pressure entry…' to '…(Reactor Scram) following a high reactor pressure entry…'. This makes C incorrect because no 1.68 psid exists.

Recommend changing the first bullet from 'Containment temperature is 165°F and rising 2°F/minute' to 'Containment temperature is 165°F and rising 1°F/minute'. This makes the time before emergency depressurize is required 20 minutes instead of 10 minutes. The 20 minute time element would clearly make the EOP basis discussion about anticipating emergency depressurization dictate that anticipating is the correct action to take under the given conditions being that all administrative actions could be taken and still have sufficient time to peform the emergency depressurization.

Answer/Distractor:

NONE.

Other:

LICENSEE COMMENTS

QUESTION NO. 81
SRO

The plant has experienced a LOCA inside the drywell. Conditions are:

- RPV level is -186 inches and lowering
- RPV pressure is 700 psig and lowering
- Drywell temperature is 250°F and slowly rising
- All methods of injection are unavailable
- One RHR pump is being returned to service, and will be available in 5 minutes

Based on this, the SRO will enter _____.

A. EOP-4, Emergency Depressurization, to depressurize the reactor

B. EOP-4, Steam Cooling, to delay depressurizing the reactor

C. EOP-1, RPV Control, to rapidly depressurize the reactor

D. EOP-4, RPV Flooding, in order to restore water level

Answer: B
With level at -186 and no low pressure injection sources available, steam cooling is required
A – ED required before -186 if source of water available
C – CF required after ED in Steam Cooling AND level cannot be restored >-186
D – Required if unable to determine water level

K/A Statement: Ability to determine and/or interpret reactor water level as it relates to Reactor Low Water Level.

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
295031 EA2.01	**N/A**	**4.6**	**43.5**	**EOP-1 EOP-4**	**None**

Tier/Group: 1/1 LOK: H LOD: 3
Origin: NRC
History: New NRC BANK QID: N/A

COMMENTS:

Stem:
NONE

Answer/Distractor:
NONE

Other:
EOP-04 Alternate Level Control needs to be handed out for this question. The question asks what will the SRO enter and entry conditions are required to be committed to memory. But this is actually a transition from alternate level control and transition points are not required knowledge. The answer also incorporates EOP basis into it making

more than just determining the transition requirement from Alternate Level Control to Steam Cooling.

LICENSEE COMMENTS

QUESTION NO. 83
SRO

The reactor was operating at 100 percent power with all systems operating normally when a reactor scram occurred and the recirculation pumps tripped. RCIC and HPCS started, and reactor pressure is now being maintained by SRV cycling. The following annunciators are noted by the CRS immediately after the scram:

- P680/06A/B04 RPS TRIP RHR ISOL LOW RX WATER LEVEL 3
- P680/06A/A05 RPS TRIP REACTOR VESSEL HIGH PRESSURE
- P680/05A/C01 and C02 CHANNEL A HALF ATWS and Channel B HALF ATWS
- P601/19/A01,A03, B01 and B03 NSSS CHAN A/B/C/D INIT MS TNL HI AMB TEMP

Based on this, the CRS should enter _____.

A. AOP-4 (Loss of Condenser Vacuum)

B. AOP-3 (Automatic Isolations)

C. SOP-11 (Main Steam System)

D. SOP-22 (Instrument Air System)

Answer: B
Inadvertent MSIV isolation signal
A – Loss of vacuum would give similar outcomes, but not the alarms received
C – SOP-11 is for operation
D – SOP-22 instrument air normal prior to event. A loss of instrument air would require entry into an AOP.

K/A Statement: Ability to determine/interpret reactor pressure as it applies to inadvertent containment isolation.

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
295020 AA2.04	**N/A**	**3.9**	**43.5**	**AOP-3 STM-58**	**None**

Tier/Group 1/2 LOK: H LOD: 2
Origin: NRC
History: New NRC BANK QID: N/A

COMMENTS:

Stem:

Answer/Distractor:

A. AOP-004 is 'Loss of Offsite Power' not Loss of 'Condenser Vacuum'

Other:

LICENSEE COMMENTS

QUESTION NO. 85
SRO

The plant has experienced a LOCA. The following conditions exist:

- RPV pressure is 250 psig
- RPV level is +10 inches and slowly rising
- Containment pressure is 1.5 psig
- Drywell temperature is 200°F
- Drywell hydrogen concentration is 4 percent
- Containment hydrogen concentration is 1 percent

Based on this, the SRO should _____.

A. Enter EOP-2 at Hydrogen Control and initiate hydrogen mixing

B. Continue EOP-1 at Pressure Control and initiate shutdown cooling

C. Enter EOP-2 at Hydrogen Control and operate all hydrogen igniters

D. Enter EOP-4 Emergency Depressurization, to rapidly reduce plant pressure

Answer: C
With hydrogen concentration below the HDOL (4% is minimum on graph), all igniters can be run
A – Hydrogen mixing not allowed with RPV pressure above 30 psig
B – Shutdown cooling interlock not clear
D – Drywell temperature is not high enough

K/A Statement: Ability to determine and/or interpret the combustible limits for the drywell as it applies to high containment hydrogen concentration.

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
500000 EA2.03	**N/A**	**3.8**	**43.5**	**EOP-2 EOP-2 basis**	**None**

Tier/Group: 1/2 LOK: H LOD: 4
Origin: NRC
History: New NRC BANK QID: N/A

LICENSEE COMMENTS

COMMENTS: (Question #85)

Stem:

Answer/Distractor:

B. Recommend changing from 'Continue EOP-1 at Pressure Control and initiate shutdown cooling' to 'Per EOP-1 Pressure Control Leg initiate shutdown cooling.' B as written is correct. If you 'continue' in the pressure control leg you will be directed to continue the cooldown and place RHR is suppression pool cooling.

Other:

EOP-02 needs to be handed out for this question. This question asks mitigation strategy and that knowledge is not required to be committed to memory.

LICENSEE COMMENTS

QUESTION NO. 95
SRO

The station is coming out of an outage and the following plant conditions exist.

- Average reactor coolant temperature is 140 degrees
- The mode switch is in SHUTDOWN
- Three reactor head closure bolts remain fully tensioned

With these conditions, the reactor is in MODE:

A. 5

B. 4

C. 3

D. 2

Answer: A
A is correct because temperature is less than 200 degrees and all the head closure bolts are not tensioned
B is incorrect because there are reactor head closure bolts that are not tensioned
C is incorrect because temperature is less than 200 degrees
D is incorrect because the MODE switch in not in startup
K/A Statement: Ability to determine mode of operation.

K/A	RO	SRO	10 CFR 55	TECHNICAL REF	OBJECTIVE REF
Generic 2.1.22	**N/A**	**3.3**	**43.1**	**TS 1.0**	

Tier/Group 3 LOK: H LOD: 3
Origin: NRC
History: New NRC BANK QID: N/A

COMMENTS:

Stem:

Answer/Distractor:

Other:

This is similar to a question that was on the audit exam. The audit exam question #54 follows for your review.

LICENSEE COMMENTS

2007 River Bend HLO Audit Exam

Question #54

The plant is in a Refueling Outage and plant conditions are as follows:

- The Reactor Mode Switch is in SHUTDOWN
- RPV Head Bolt tensioning is in progress
- Reactor Coolant System Temperature is 190°F

Presently, the plant is in:

A. Mode 2

B. Mode 3

C. Mode 4

D. Mode 5